AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph starting on page 8, line 13 with the following replacement paragraph which shows all changes relative to the previous version of the document:

As shown for example, in Fig. 1, electricity meters 10 include coils 12 having blades 14 passing through a base plate 16 for coupling to the electrical service line 50 (see Figs. 2 and 3) from which power consumption will be monitored. A PWB, register or measurement board 18 is provided on which hardware is present for acquisition, processing and storage of power consumption data and other metrics. Such hardware is referred to herein as data acquisition and storage hardware 30 (see Fig. 2). Data acquisition and storage hardware 30 implements the primary critical function of the electricity meter 10, i.e. to acquire and store power consumption data for access by utility personnel.

Please replace the paragraph starting on page 12, line 14 with the following replacement paragraph which shows all changes relative to the previous version of the document:

The peripheral device 31 present on optional PCB [[18]] 24 typically draws power from the same on-board power supply 28 that powers the data acquisition and storage hardware 30. In the illustrated embodiment, optional communications board 24 includes power conditioning circuitry,

not shown, thereon for regulating an unregulated voltage output by the meter's power supply 28. As mentioned above, optional communications devices 31 often require power to be provided at different voltage and current levels than required by data acquisition and storage hardware 30.

Please replace the paragraph starting on page 16, line 3 with the following replacement paragraph which shows all changes relative to the previous version of the document:

Illustratively, switching power supply 28 includes an intermediate output of an unregulated voltage V_{UR} 52 and a regulated voltage output 54. Illustratively, the regulated voltage output 54 by ~~switcher~~ switching power supply 28 is +5 Vdc. Regulated voltage 54 is provided to power the integrated circuits including sensors 56, memory or registers 32 and microcontroller 36 and other components present on the data acquisition and storage hardware 30 on the register board 18. Peripheral devices 31 powered by the switching power supply 28, such as modems, KYZ options, RS-232/RS-485, radios, etc., that may pose a heavy loading on ~~switcher~~ switching power supply 28 are disabled during the initial start-up period. Once ~~switcher~~ switching power supply 28 has reached its steady state operation, load management system 40 enables the operation of the peripheral devices 31. Furthermore, during the loss of AC power, load management system 40 disengages all peripheral devices 31 early in the power down sequence to allow more time to store service related

information in non-volatile memory (EEPROM) 32.

Please replace the paragraph starting on page 17, line 3 with the following replacement paragraph which shows all changes relative to the previous version of the document:

Illustratively, the voltage divider ~~52~~ 70 includes a first resistor 64 and a second resistor 66. Illustratively, first resistor 64 is a 10kOhm resistor and second resistor 66 is a 1 KOhm resistor. These resistor values are selected to provide a gate voltage sufficient to turn transistor 62 fully on when the LOAD_CONTROL signal is present on the appropriate pin of microcontroller 36.

Please replace the paragraph starting on page 17, line 8 with the following replacement paragraph which shows all changes relative to the previous version of the document:

Illustratively, switch 58 is responsive to a LOAD_CONTROL signal 60 generated under conditions described below. Illustratively, the LOAD_CONTROL signal 60 is generated by the microcontroller 36. Meter 10 includes the microcontroller 36 for digital signal processing of, and for calculation of power consumption data from, metrics sensed by sensors 56. The illustrated embodiment of the load management system 40 utilizes the microcontroller 36 already present on the register board 18 to implement a signal generator 68 (see Fig. 2) of the load management

system 40. Illustratively, LOAD_CONTROL signal 60 is generated by the microcontroller 36 that is an 8-bit microcontroller available from NEC as part No. uPD78F0338.

Please replace the paragraph starting on page 17, line 17 with the following replacement paragraph which shows all changes relative to the previous version of the document:

In the illustrated meter 10, the microcontroller 36 is already present on the register board 18 and is programmed to generate an alert signal when voltage is low on ~~pin 21 (~~R_ATTN line[[)]]. This signal is illustratively used also as LOAD_CONTROL signal 60. It is within the scope of the disclosure, for LOAD_CONTROL signal 60 to be generated by other signal generators 68 such as controllers, processors, logic circuits and the like.

Please replace the paragraph starting on page 19, line 20 with the following replacement paragraph which shows all changes relative to the previous version of the document:

Once it is determined that meter 10 is not in start-up mode, or after disengaging the peripheral devices 31 because meter is in start-up mode and waiting until the unregulated voltage has reached the first threshold voltage, the microcontroller 36 determines whether meter is going through a power-down mode in ~~step 516~~ steps 518 and 520.

Please replace the paragraph starting on page 24, line 15 with the following replacement paragraph which shows all changes relative to the previous version of the document:

Operation of load management system 140 is substantially similar to operation of load management system 40. The algorithm illustrated in Fig. 5 may be implemented in either load management system 40 or 140. During a start-up cycle, all peripheral devices 131 are disengaged by the microcontroller [[~~36~~]] 136 sending a logical low LOAD_CONTROL signal 160 to all of the switches 158 on option boards 124. The microcontroller 136 continues to send a logical low LOAD_CONTROL signal 160 until the unregulated voltage V_{UR} across the storage capacitor 134 reaches a first threshold value (V_{TH1}). Once the unregulated voltage is greater than the first threshold voltage ($V_{UR}>V_{TH1}$), the operation of peripheral devices 131 is enabled by microcontroller 136 sending a logical high LOAD_CONTROL signal 160 to each option board 124.

Please replace the paragraph starting on page 25, line 8 with the following replacement paragraph which shows all changes relative to the previous version of the document:

As shown, for example, in Fig. 7, a second embodiment of an electricity meter 110 with load management control includes a power supply 128, a principle load illustratively including data acquisition and storage

hardware ~~130~~ present on a metering board 118, a peripheral device 131 resident on an option board 124 and a load management system 140. Illustratively, power supply 128 taps AC lines 50 to provide power to the power supply 128. A transformer 142 steps down the voltage from the line 50 and supplies the stepped down voltage to a bridge rectifier 144. Illustratively, the rectifier 144 is a full wave rectifier. An appropriate full wave rectifier 144 is available as a single integrated circuit from Diodes Incorporated, 3050 E. Hillcrest Drive Westlake Village, CA 91362-3154 as part No. DF02M. It is within the scope of the disclosure for rectification to be accomplished using other integrated circuits or discreet components. The rectified stepped down voltage is supplied to a storage/filtering capacitor 134 that acts to smooth the voltage wave form. Illustratively, the capacitor 134 is an aluminum electrolytic 3,300 μF, 25Vdc low impedance capacitor available from Panasonic USA a division of Matsushita Electric Corporation of America, as part no. EEUFC1V332.

Please replace the paragraph starting on page 27, line 7 with the following replacement paragraph which shows all changes relative to the previous version of the document:

As shown, for example, in Fig. 7, the low cost load management system 140 includes a signal controlled electronic switch 158 selectively providing unregulated voltage V_{UR} to the peripheral devices 131 when a high LOAD_CONTROL signal 160 is generated by the signal generator

168. Illustratively, signal controlled switch 158 is a discrete low cost PNP transistor 162 having its emitter ~~182~~ coupled to the unregulated voltage, its collector ~~184~~ coupled to the peripheral device 131 and its base ~~180~~ coupled through a voltage divider to the unregulated voltage and the LOAD_CONTROL signal 160. Thus, when an appropriate high LOAD_CONTROL signal 160 is presented at the base ~~180~~ of transistor 162, the unregulated voltage V_{UR} passes through the transistor 162 to the peripheral device 131.